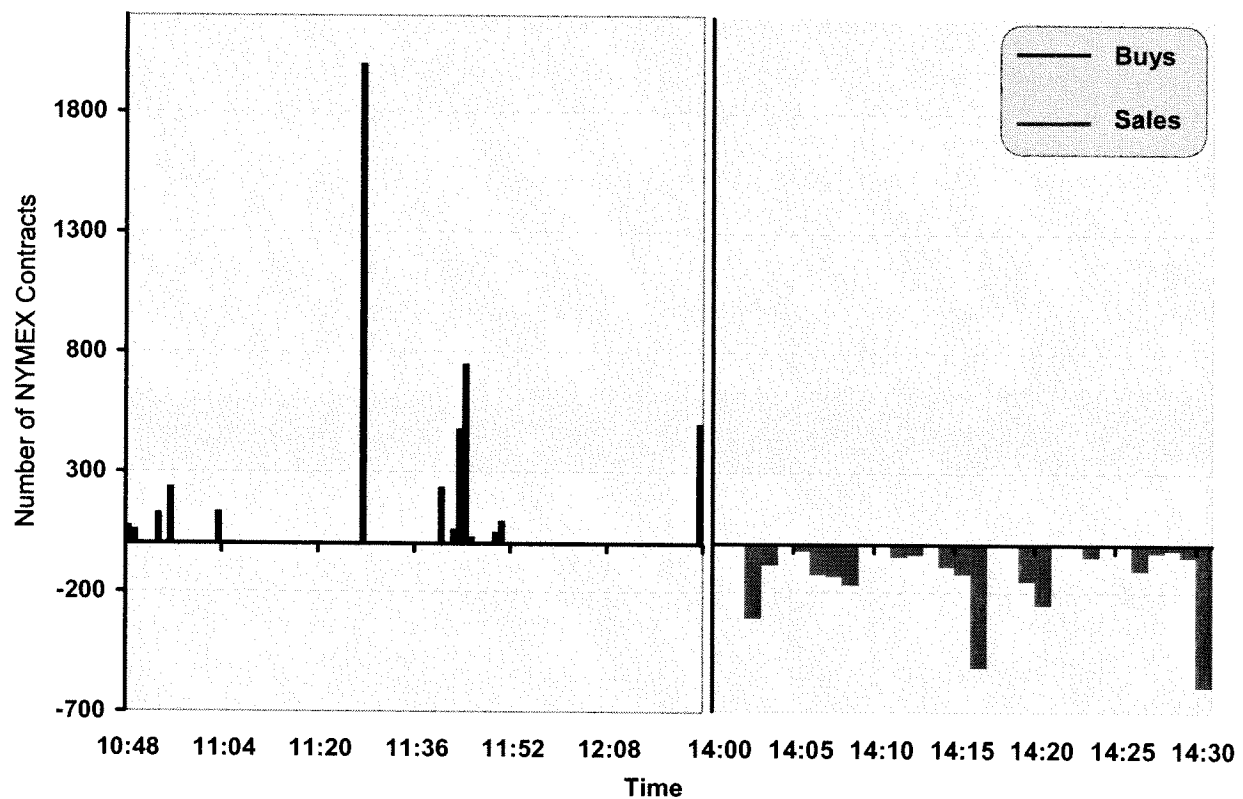


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long position) and the red bars representing sales in each minute (all of which occurred in the settlement period). The second graph in Figure 7 illustrates Amaranth's net positions. The reversal of position before the settlement, the size of the long position, and the timing of the liquidation by sales immediately after the start of the settlement period, all evidence an intent to take the position substantially long before going flat in the settlement period.

Figure 6: February 24th Amaranth Trading Before and in the Close For the March 2006 Contract¹³²

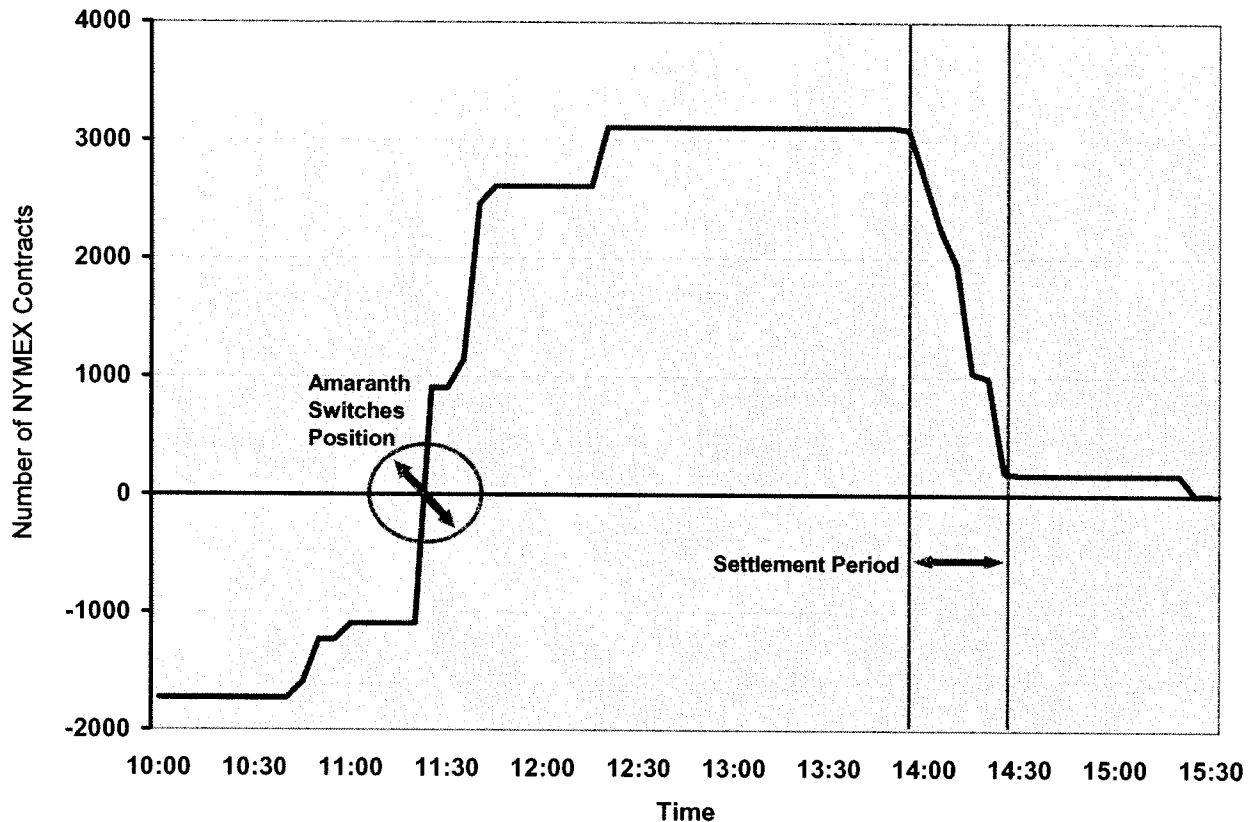


¹³² NYMEX_00003 (NYMEX NG Futures Contract trade data).

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**Figure 7: Amaranth March 2006 Termination Day February 24, 2006:
Intraday NYMEX Natural Gas Position¹³³**



77. Amaranth had ample motive to drive down the NG Futures settlement price. Amaranth's position in the derivative March swaps was short (13,167.5) futures contract equivalents.¹³⁴ The value of this position increased proportionate to the decline in the March NG Futures Contract settlement price. In addition, Amaranth maintained short positions in the "prompt-next" or April NG Futures Contract. The prompt-next month

¹³³ NYMEX_00003 (NYMEX NG Futures Contract trade data).

¹³⁴ In reference to financially-settled swaps, the terms "contracts" and "futures contract equivalents" will be used interchangeably here, and refer to the size of the NG Futures Contract, which is 10,000 MMBtus/month. However, the various types of natural gas swap contracts (*e.g.*, Clearport or NN Contract, ICE swaps, bilateral swaps, *etc.*) vary in size, so the positions in these various instruments have all been converted into "futures contract equivalents."

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NG Futures Contract trades in the same pit, at the same time, as the prompt-month (expiring) contract. Because the two contracts are similar as to their fundamentals, the trading in the prompt-month contract tends to affect the trading in the prompt-next NG Futures Contract as well. So, manipulation of the prompt-month NG Futures Contract sales has an effect on the sales of the prompt-next contract. At the end of the settlement day, the prompt-next NG Futures Contract is also assigned a "settlement price," as are all NG Futures contracts for subsequent months and derivative contracts such as swaps and options. Each settlement price is based on only the last two minutes of sales, and is not a final settlement price, because those NG Futures Contracts have not yet terminated.¹³⁵ These settlement prices establish the relative value of each contract versus the prompt month contract, and are the basis for determining marked-to-market values for these instruments.

78. Accordingly, if the artificial lowering of the prompt-month NG Futures Contract settlement price was effectuated significantly through sales in those final two minutes, or resulted in artificially lower prices in those last two minutes (because of the momentum of trading in the first twenty-eight minutes), the settlement price of the prompt-next month would also be artificially lowered. Consequently, any short position in the prompt-next contract would also be benefited. On February 24, Amaranth held a short position of (16,613.25) contracts in the prompt-next month, *i.e.*, the April NG Futures Contracts and swaps. Thus, trading on February 24 benefited Amaranth's positions in its net short position (*i.e.*, including both the NG Futures Contract and swaps) in both the March and April contract months.

79. Dr. Kaminski concludes that Amaranth manipulated the market for the March contract (and in the other months addressed in this order). In addition to reviewing the overall record, from an econometric perspective, he demonstrated a very high degree of correlation between large trader transactions in the settlement period and price movements. For example, he evaluated share and concentration using standard techniques such as the Herfindahl-Hirschman Index (HHI) along with price trends in order to correlate concentration with price effects. He showed that relatively higher HHIs on the buy side of the market correlate very strongly (*i.e.*, have a high r-squared) to a statistically significant degree with upward movement in prices and a similarly high correlation between relatively higher levels of concentration HHIs on the sell side and

¹³⁵ On days other than a settlement day, every NG Futures Contract, including the prompt-month contract, is assigned a two-minute settlement price at the end of the trading day.

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downward movement in prices.¹³⁶ In other words, large traders have a statistically significant ability to artificially move the market price during the settlement period. In addition, he analyzed the degree of persistence of effect on the market Amaranth's large selling in real time during and over the course of the thirty minutes settlement period using, for example, auto-regressive integrated moving average techniques in order to assess the degree of impact on the resulting settlement price.¹³⁷

80. Amaranth profited by roughly \$27,300,000 (at least) from its manipulation of the March NG Futures Contract settlement price.¹³⁸ This figure is necessarily an estimate. Given the complexity of the market involved, the importance of the psychology of the trading pit, which is not susceptible to precise modeling, and limits to the precision of the available data (as to time stamps, for example) it is impossible to determine precisely what the settlement price would have been absent Amaranth's manipulative selling. Nor is there one single method for estimating such impact. But reasonable estimates are derivable. Dr. Kaminski has evaluated several methods for estimating the price impact of Amaranth's trading, including varying degrees of conservatism. We require nothing more for our determination of such matters as market impact and disgorgement, once wrongdoing is determined.

81. Amaranth's net short position in the March NG Futures Contract and March swaps of (10,056.5) contracts would have benefited by slightly more than \$1 million per penny decrease in the settlement price of the March NG Futures Contract. Prior to the beginning of the settlement period on February 24, the NG Futures Contract had been

¹³⁶ Here the typical relationships between HHIs and prices are reversed because of the need for most parties to exit in order to avoid the delivery obligation. Normally concentration and share in a buyer side would raise concerns that the buyer would be able to command lower prices; here however the combined effect of the delivery risk and the fact that some participants can take delivery creates the proverbial "musical chairs" phenomenon.

¹³⁷ For reasons discussed more fully below, he advises that this technique is probably not appropriate for evaluation of the May contract due to the unique profile of Amaranth's selling in that settlement.

¹³⁸ Amaranth's profits from its manipulation are calculated based on its net position in the NG Futures Contract and swaps. Therefore, any potential losses that Amaranth may have suffered on its NG Futures Contract are already accounted for, as they would be offset by the profits on an equal volume of swaps (*i.e.*, an equal number of futures contract equivalents of swaps).

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trading at around \$7.40, but the prices declined sharply during the settlement period and the March NG Futures Contract settled at \$7.112.¹³⁹ Dr. Kaminski estimates that Amaranth's manipulation was directly responsible for a portion of that drop. The most conservative estimate is \$.09, a mid-range is \$.12 and the least conservative (but still reasonable) estimate is \$.29. Thus, as to the March NG Futures Contract and March swaps, Amaranth's estimated gain from its manipulation is the product of the \$1 million per penny change and between \$.09 and \$.29, for a realized gain of between \$9,000,000 and \$29,000,000.¹⁴⁰ In addition, Amaranth had a net short position of (16,613.25) April NG Futures Contract and swaps, which would have benefited by roughly \$1.661 million per penny decrease in the April NG Futures Contract settlement price for the day. Amaranth's trading on February 24 caused the April NG Futures Contract to settle an estimated between \$.11 and \$.36 lower for the day, resulting in a marked-to-market gain between \$18,300,000 and \$60,000,000.

82. According to Amaranth's contemporaneous records, the total one-day net trading profits for Hunter's group ("Calgary Energy") on February 24 were \$45,350,447.¹⁴¹

¹³⁹ Our analysis is based on two sets of NYMEX data: (1) the complete set of trades recorded by the NYMEX on the settlement day; and (2) the set of trades that NYMEX used to calculate the settlement price. There are some differences between these sets based on NYMEX administrative practices. For example, some trades whose time-stamps in the first data set indicate that they occurred during the settlement period (*i.e.*, that are time-stamped from 2:00 p.m. to 2:30 p.m.) were not included in the settlement calculation because of various defects in the trades subsequently determined by NYMEX in arriving at the settlement price and reflected in the "Validation Codes" in the second set of data. Other trades appear to have been modified between the recording and inclusion in the settlement, in particular, where NYMEX corrected apparently erroneous time stamps. Finally, a few trades used to calculate the settlement price are not in the set of trades that occurred on the settlement day. These issues affect a small percentage of the total trades, and the settlement prices calculated using the two sets of data are nearly identical (*i.e.*, within a fraction of a penny). The data differences do not change our fundamental analysis or conclusions.

¹⁴⁰ In addition to these amounts, Amaranth may have had marked-to-market gains for other contract months or in other prompt-month or later instruments such as basis swaps or options, which are not included here.

¹⁴¹ AALLC_REG0692140-45 (Amaranth E-mail of February 27, 2006). According to this e-mail, Hunter's books had daily profits on February 24 of roughly \$15 million each in his "SKEW2" and "WINTERVOLSPREAD2" strategies, which included large positions in the March NG Futures Contract and March swaps. Moreover, the cover
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Thus, these gains were offset in the daily Profit and Loss by losses elsewhere in this complicated book.¹⁴² However, the greatest gains show up in the portions of the book where the short March and April swap positions were held. More generally, the gains on the day are more than three times the average daily gains the book had enjoyed up to that point, year-to-date.

83. For a variety of reasons, it appears that a proportion of trades that are originally reported to have occurred in the settlement periods were routinely not actually used by NYMEX in calculating the settlement price. Indeed a number of Amaranth's trades actually ended up not being included in NYMEX's calculation of the March contract settlement price, based on NYMEX's administrative practices pertaining to said calculation.¹⁴³ This fact does not detract from our finding of manipulation primarily

e-mail to which this P&L statement was attached states that the Calgary Energy group gained on *the week* \$198 million "on short Mar-Jul 06 positions as prices *decreased* by an average of \$0.05," (emphasis added) though it is possible that this weekly amount includes gains from previous days. Analysis of the raw data provided by Amaranth, which includes only trades related to natural gas, shows daily profits for February 24 of about \$49 million, with about \$17 million in the SKEW2 strategy and \$10 million in the WINTERVOLSPREAD2 strategy (with the difference from overall P&L's likely attributable to non-gas related portions of these strategies).

AMARANTH_REG091722_pos0223.xls, AMARANTH_REG091723_pos0224.xls (Amaranth end of day position reports for February 23 and 24, 2006).

¹⁴² For example, Amaranth's Profit and Loss (P&L) statement reflects the full effect of the drop in price during the settlement period, not just the portion of the volume-weighted average price that Amaranth's trades constituted, as well as profits and losses from trades that were unrelated to the manipulation. However, the downward movement of subsequent contract months was generally beneficial to Amaranth's book because it had a net short position in the March 2006 through November 2006 NG Futures Contracts. Moreover, the impact of changes in the prompt-month contract on other contract months generally decreases as the time to the contract's maturity increases. For example, a decrease in the price March 2006 NG Futures Contract would result in a larger decrease in the price of the April 2006 NG Futures Contract than it would for the March 2007 NG Futures Contract.

¹⁴³ According to the data provided by the NYMEX, it appears that for the March 2006 NG Futures Contract termination, between 51 and 59 percent of Amaranth's trades time stamped between 2:00 p.m. and 2:30 p.m. are included in the settlement. For the April 2006 contract termination, approximately 92 percent of Amaranth's trades time stamped between 2:00 p.m. and 2:30 p.m. are included in the settlement. For the May

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because the most trenchant effect on the settlement price is not from the inclusion of Amaranth's progressively lower priced sales in the after-the-fact *calculation*, but instead from the impact, *in real time*, of Amaranth's sales on the entire pit trading environment as discussed above. The simple point is that Amaranth went into the pit with its large and obvious sales orders, with the intent to lower the settlement price, the entire pit reacted to that dynamic resulting in overall lower priced trading. Whether each of those Amaranth trades was included in the settlement calculated some hours later does not detract from the market-wide impact that occurred between 2:00 and 2:30 – and which created the universe of trades from which the settlement was calculated. Moreover, the exclusion of some trades did not materially affect the final settlement price. A calculation of a volume-weighted average price using all trades occurring in the thirty minutes yields a virtually identical price as the published price.

84. Based on the evidence described above, and in the absence of any credible alternative explanation or justification for this trading behavior, we preliminarily find that Amaranth manipulated the settlement price of the March 2006 NG Futures Contract, in violation of the Anti-Manipulation Rule.

2. Trading on March 29, 2006: *A Second Try*

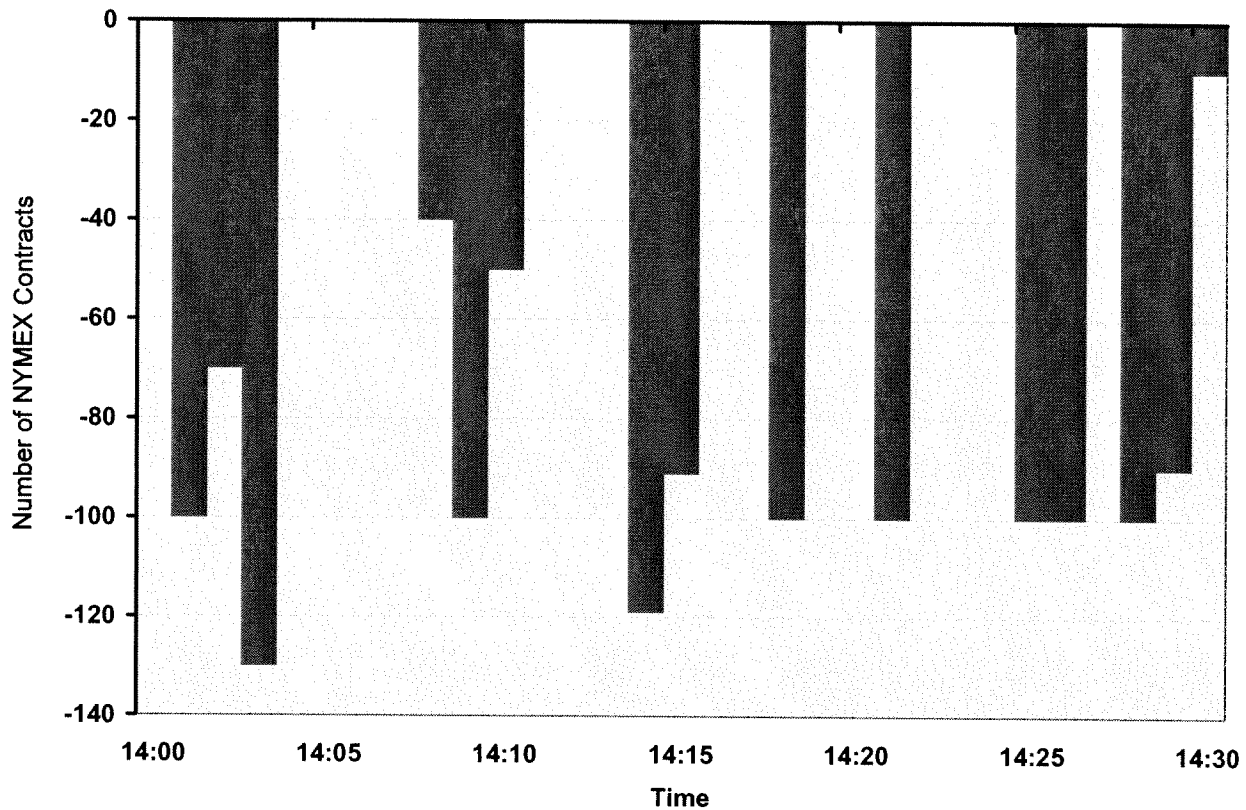
85. After the success of the “experiment” in the February 24 trading for the March Contract, Hunter and Donohoe apparently decided to repeat this strategy for the April Contract on March 29. As on February 24, Amaranth held a large long position in the April NG Futures Contract prior to the settlement period, and proceeded to sell it “MoC” during the close. Amaranth's trade data, which are summarized in Figure 8 below, again provide strong evidence that Donohoe and Hunter employed a nearly identical trading strategy as that used for the previous month.

2006 contract termination, it appears that as much as 64 percent of Amaranth's trades time stamped between 2:00 p.m. and 2:30 p.m. are included in the settlement.

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Figure 8: Amaranth's Trading in the Settlement Period for the April 2006 Contract¹⁴⁴



86. On March 29, Amaranth entered the day with a long position of 1,603 April NG Futures Contracts.¹⁴⁵ In three separate orders, Amaranth directed ALX to sell 303 April

¹⁴⁴ NYMEX_00004 (NYMEX NG Futures Contract trade data).

¹⁴⁵ AMARANTH_REG091745_pos0328.xls (Amaranth end of day position report for March 28, 2006); AALLC_REG0672343 (E-mail at 10:10 a.m. on March 29 from Malach to Calgary Energy traders, among others, in which he request that they “[p]lease make sure that we are flat today with the below contracts, NGJ6. We agree with JPMU with Long 1603.”). This is further confirmed by Donohoe’s contemporaneous statements, e.g., when he reported at 3:54 p.m. on March 29 to Malach, a compliance officer, that he had sold 1,603 futures that day to flatten his position. AALLC_REG0701583.

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NG Futures Contract prior to the close between 12:41 p.m. and 1:50 p.m.¹⁴⁶ At 2:00 p.m. and 2:03 p.m. Amaranth placed further orders for ALX to sell 100 April NG Futures Contracts and 1,200 April NG Futures Contracts “MOC.”¹⁴⁷ Once again, Delucia/Jim X of ALX was the selling broker in the trading ring.

87. During the week prior, Amaranth built its aggregate April swap position from being short roughly (9,500) futures contract equivalents at the end of the day on March 21 to short (17,884) futures contract equivalents at the end of the day on March 29.¹⁴⁸ Thus, although the amount of NG Futures Contract selling was *less* than the selling in the March contract, the amount of short swap contracts that stood to benefit from a lowered NG Futures Contract prices was *much greater*.

88. Amaranth profited by roughly \$11,200,000 (at least) from its manipulation of the April NG Futures Contract on March 29. On March 29, the April NG Futures Contract was trading between about \$7.26 and \$7.32 in the half hour before and at \$7.34 at 2:00 p.m., and then prices dropped right at the beginning of the settlement to about \$7.15. From 2:00 p.m. to 2:30 p.m., the April NG Futures Contract traded in the range of \$7.15 to \$7.37 and settled at \$7.233. Using the same methods applied to trading in the March NG Futures Contract, Dr. Kaminski estimates that Amaranth’s trading caused the settlement price of the April NG Futures Contract to decrease by somewhere between \$.04 and \$.09 from where it would have settled without Amaranth’s trading. Amaranth’s April NG Futures Contract and April swap positions realized gains of \$1.788 million per penny decrease in the settlement price of the April NG Futures Contract, for a total profit of between \$7,200,000 and \$16,000,000. In addition, Amaranth had a net short position of (19,639.5) contracts in the May NG Futures Contract and swaps, whose value increased by about \$1.964 million per penny decrease in the May NG Futures Contract settlement price for that day. Amaranth’s trading caused the May NG Futures Contract to settle lower by between \$.02 and \$.13 for a marked-to-market gain of between \$4,000,000 and \$25,500,000.

¹⁴⁶ ALX047-49.

¹⁴⁷ ALX045-46.

¹⁴⁸ AMARANTH_REG091740_pos0321.xls, AMARANTH_REG091746_pos0329.xls (Amaranth end of day position reports for March 21 and 29, 2006). As before, Amaranth’s other positions that may have benefited from a decline in the settlement price of the April NG Futures Contract are not included here.

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89. Once again, Amaranth's trading patterns and the evolution of its positions in the April NG Futures Contract and April swaps evidence intent to artificially reduce the settlement price of the April NG Futures Contract. While Amaranth reversed its NG futures position from short to long on March 23 it maintained a short swap position through the end of the day on March 29 that significantly exceeded the long futures position, which demonstrates that its true aggregate position was net short. Amaranth held on to the majority of its long NG Futures Contract position until the beginning of the settlement, when it sold 1,300 contracts, including a single 1,200 contract MoC order. The intent and effect of such trading was to drive down the settlement price.

90. There are virtually no contemporaneous documents for this March 29 trading (as compared to those relating to February 24). In February, Hunter was trading alone in Calgary and thus needed to work through Donohoe in Greenwich. This created more of a "virtual paper trail" than exists for March, by which point Hunter had Donohoe and most of the rest of Hunter's team working in Calgary in a single trading room about the size of a large conference room. They were sitting right next to each other, and it is reasonable to conclude that the instant messages between the two became largely unnecessary.¹⁴⁹ In addition, it is conceivable that the traders, by then perhaps more fully comprehending the significance of their activities, determined that it might be prudent to stop any further recording of their thoughts and intentions in real-time.

91. Based on the evidence described above, and in the absence of any credible alternative explanation or justification for this trading behavior, we preliminarily find that Amaranth manipulated the settlement price of the April 2006 NG Futures Contract, in violation of the Anti-Manipulation Rule.

¹⁴⁹ Hunter testified that he was on vacation in the Maldives during the settlement for the April contract, had no involvement with this close and no idea why Donohoe would have traded as described above. Hunter Dep. 50:15-51:14 (June 15, 2007). We have no reason to doubt that he was traveling. However, we find the notion that he neither was in contact with Donohoe nor had left instructions about the trading to be highly dubious, given the events of the preceding month, the importance of closing out the futures position to avoid delivery, and Donohoe's lack of authority to trade for a book on his own. Moreover, Hunter and Donohoe were in communication on March 29 regarding Hunter's book and other matters. AALLC_REG0700464 (Mar. 29, 2006, 4:13 a.m. E-mail from Donohoe to Hunter with the subject line "Call me asap" and stating, "Your book. Is fine. Your attn is needed elsewhere immediAtely [sic] unfortunately [sic]."); *see also* AALLC_REG0680310 (chain of March 26, 2006 E-mails between Donohoe and Hunter).

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3. Trading on April 26, 2006: *The “Last Eight Minutes”*

92. On April 26, 2006, the settlement day for the May NG Futures Contract, Hunter and Donohoe tried for a third time their new strategy, which had been so successful during the previous two months, but this time with a refinement likely (as discussed more fully below) directed also at the “prompt-next” spread value. As it turns out, Amaranth was not as successful in driving down the settlement price as before. However, the trade and position data and a few documents which capture communications between Calgary traders and managers in Greenwich and one taped telephone call between Donohoe in Calgary and brokers on the NYMEX trading floor in New York, again strongly indicate the manipulative intent and conduct.

93. Amaranth began April 26 with a long position of 3,044 May NG Futures Contracts.¹⁵⁰ In instant messages between Hunter and David Chasman, an energy risk manager in Greenwich, which took place seven minutes into the start of the settlement period, Hunter explained that Hunter is still “waiting to sell” his May NG Futures Contracts.¹⁵¹

94. In fact, Donohoe placed orders with three separate brokers (TFS, Gotham, and ALX) to sell these 3,044 contracts, in a highly orchestrated fashion starting at 2:22 p.m. Order tickets and audio recordings show that he instructed two of the three to wait until the last eight minutes to sell, *i.e.*, to begin at 2:22 p.m. The phrase “last 8 minutes” is written on the order tickets for Gotham and TFS,¹⁵² while the order ticket for ALX – for 2000 May NG Futures Contract – is time stamped at 2:22 p.m.¹⁵³ Also, a taped telephone line at Gotham captured Donohoe and brokers at Gotham, as follows:

Barry: Gotham, Dave

Donohoe: TJ

¹⁵⁰ AMARANTH_REG091765_pos0425.xls (Amaranth end of day position report for April 25, 2006); AMARANTH_REG_054788-90 (August 15, 2006 Letter from Amaranth to NYMEX regarding Amaranth’s trading on April 26, 2006).

¹⁵¹ A_CFTC032878 (Hunter at 2:02 p.m.); A_CFTC032910 (Calhoun at 2:07 p.m.).

¹⁵² NX-USSEN-001548 (TFS ticket for 500 May NG Futures Contract MOC); NX-USSEN-001584 (Gotham ticket for 544 May NG Futures Contract).

¹⁵³ NX-USSEN-001350 (ALX order ticket for 2,000 May NG Futures Contract).

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[. . . pit noise in background . . .]

T.J.: Gotham T

Donohoe: Hey

[. . . pit noise in background . . .]

T.J.: Hey, Matty what's up?

Donohoe: In the last eight minutes . . .

T.J.: Yes?

Donohoe: I need you to sell five hundred and forty four Mays

T.J.: In the last eight minutes sell 544 Mays

Donohoe: Yes

T.J.: You got it, my friend¹⁵⁴

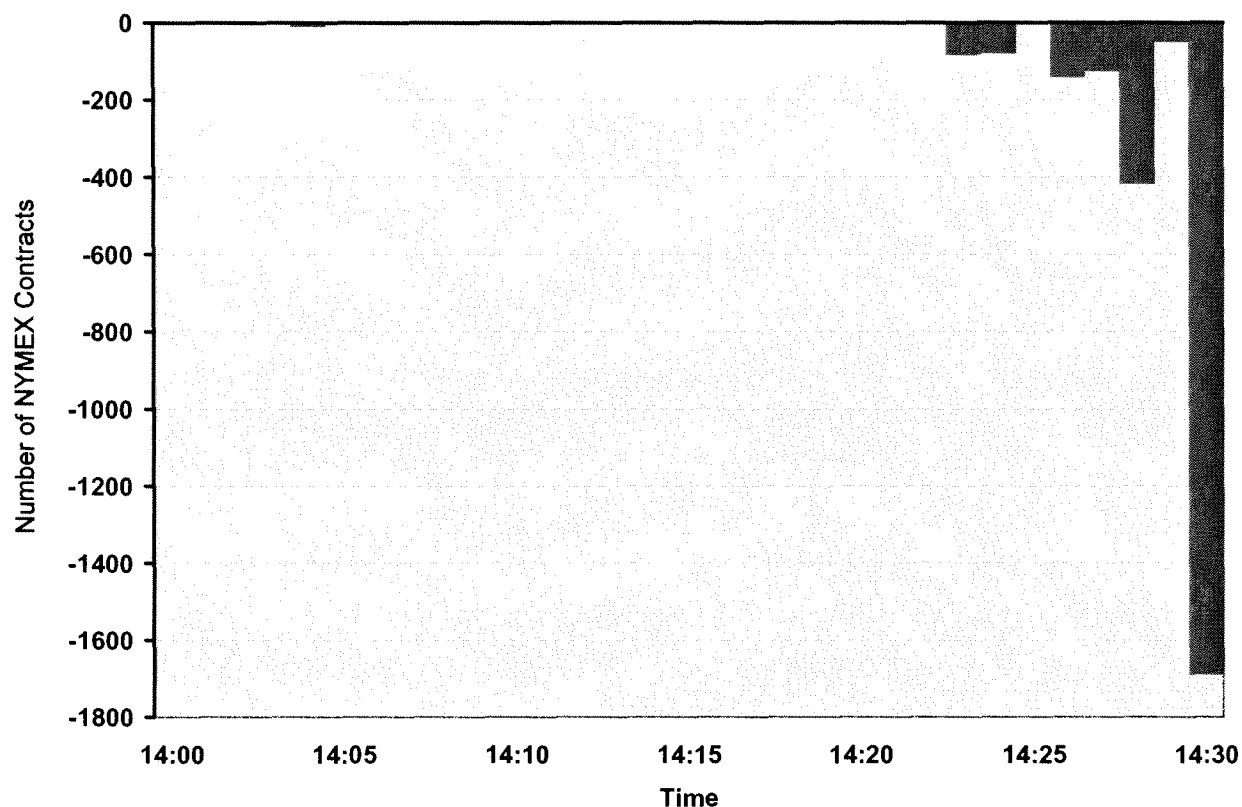
95. The time and volume of Amaranth's actual sales during the settlement period on April 26 are illustrated below in Figure 9 below.

¹⁵⁴ See NX-CFTC-7 (CD) NICESC_WAVF7 (audio file).

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Figure 9: Amaranth's Trading in the Settlement Period for the May 2006 Contract¹⁵⁵



96. As the evidence above shows, and Figure 9 demonstrates, Amaranth not only waited to sell in the settlement period, but waited to sell in the *final minutes* of the settlement period. There is no legitimate explanation or business justification for this trading behavior. While a savvy trader with only a prompt-month position including futures might legitimately wait until late in the settlement period in hopes of selling at a higher price, this is not the position that Amaranth held. Amaranth's actual net position was short (aggregated swaps and futures), and this position was significantly larger than its stand-alone prompt-month long futures position. Amaranth's net swap position's value would have been negatively impacted by a rising market that would have ostensibly benefited a stand-alone long position in futures. It is possible that this "last 8 minutes" approach was calculated to maximize the downward effect on prices owing to vanishing liquidity towards the end of the settlement period. The advantage to Amaranth would be that, given the increasingly "empty" pit in terms of remaining contract buyers, those

¹⁵⁵ NYMEX_00001 (NYMEX NG Futures Contract trade data).

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buyers would be able to purchase at even lower prices in order to allow the counterparty to “exit” before delivery, and new buyers would have an incentive to take contracts to delivery by buying at low and advantageous prices.¹⁵⁶ This activity would lower the settlement price and increase the value of Amaranth’s short swaps, which would liquidate with the termination of the futures contract. A second advantage was the extraordinary effect on the “last two minutes” of trading that impacted the settlement of the prompt-next (June) contract positions. Amaranth held an aggregated net short prompt-next (June) position between futures and swaps, as well as a long put position. Both of these positions substantially benefited by the lower settlement of the prompt-next contract that day. As discussed more fully below, Amaranth reported a profit in prompt-next positions of over \$20,000,000.

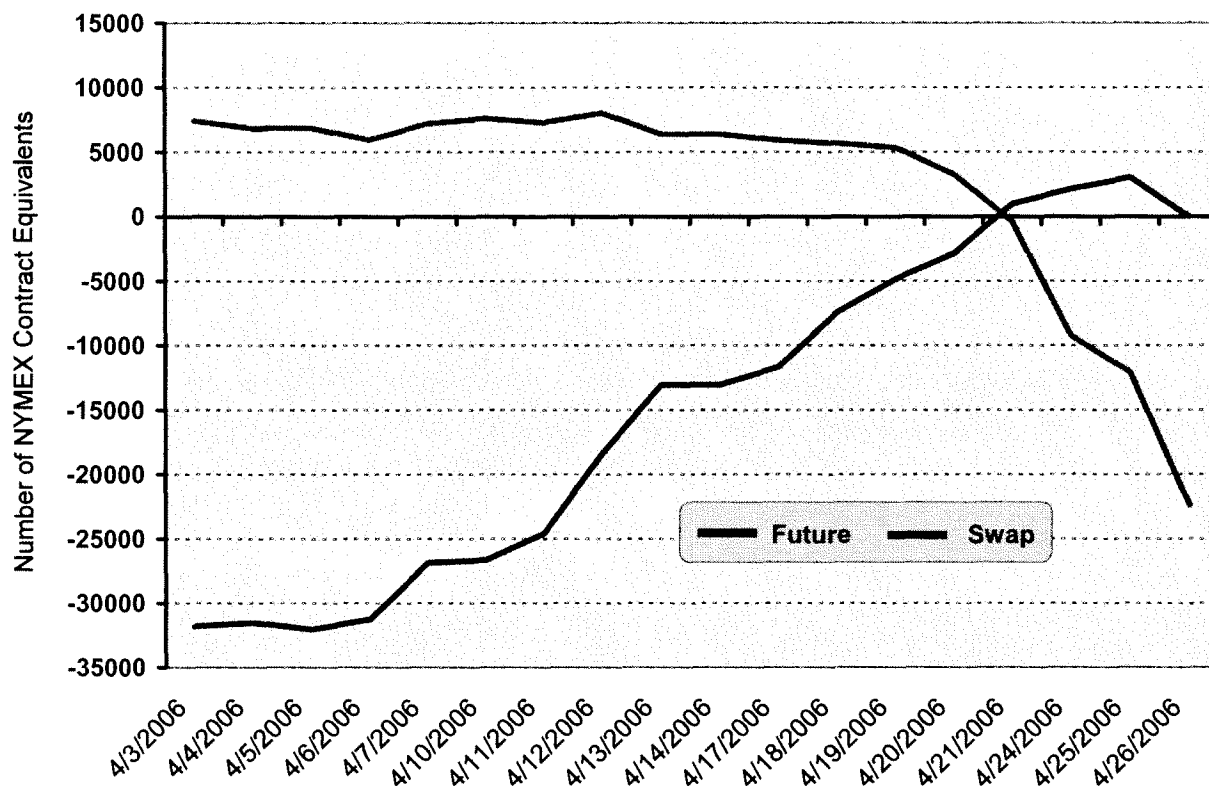
97. As Figure 10 below shows, Amaranth began the month of April with a large short position in the May NG Futures Contract (which Amaranth gradually rolled forward to other summer contract months) and a smaller long position in May swaps. But, on April 21, Amaranth reversed its positions in both, first going flat, then, between April 21 and 26, built a long position of 3,044 May NG Futures Contracts and a short position of roughly (12,000) May swaps by the beginning of the day on April 26. On April 26, Amaranth built its short May swap position even further to (22,378) futures contract equivalents.

¹⁵⁶ See Bolling Dep. 215:16-216:3 (June 29, 2007) (describing “catching the pit with less liquidity” in final minutes of trading).

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**Figure 10: Amaranth April 2006 Daily Positions:
May NG Futures Contract vs. May Swaps¹⁵⁷**



98. Amaranth made over \$20,500,000 million (at least) from its manipulation on April 26. At 2:00 p.m. on April 26, the May NG Futures Contract was trading at about \$7.12, and then traded in the range of \$7.00 to \$7.30. Notably, this profit was significantly less than it might otherwise have been because Amaranth's selling at the end of the settlement period was preceded by a fairly pronounced *increase* in prices. In this respect, the manipulative trading was only able to make the contract settle "less high" rather than

¹⁵⁷ AMARANTH_REG091749_pos0403.xls-
AMARANTH_REG091766_pos0426.xls (Amaranth end of day position reports for April 3 through April 26, 2006).

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“lower.” But, that fact is not inconsistent with a manipulation – not every manipulation need be as successful as the manipulator might have hoped in order to be actionable.¹⁵⁸

99. Amaranth’s trading caused the settlement price of the May NG Futures Contract to decrease by an estimate of \$.03. The task of estimating Amaranth’s impact is greatly simplified by the distinct profile of its selling in the May contract as compared to the March and April contracts and Dr. Kaminski assigns a higher degree of confidence to this single estimate of \$.03. Based on its net short position of (19,334) futures contract equivalents in May swaps, Amaranth would have benefited by \$1.933 million dollars per penny decrease in the NG Futures Contract settlement price, so that it realized a profit from its manipulation of \$5,800,000 on its net short position in the May NG Futures Contract and swaps. Amaranth also had a net short position of (13,380.75) June NG Futures Contract and swaps, whose value increased by \$1.338 million per penny decrease in the settlement price of the June NG Futures Contract. Amaranth’s trading on April 26 caused this price to decrease by an estimated \$.06, for a total marked-to-market gain of \$8,000,000.

100. For May, there appears also to have been an options-related element to the Amaranth trading in the settlement. For the March and April NG Futures Contract termination days, Amaranth did not establish or reduce options positions in any significant way. However, Amaranth established significant options positions in the final two days of trading for the May NG Futures Contract, which benefited significantly from Amaranth’s manipulation of that contract. Between April 24 and April 26, Amaranth executed a straightforward series of options trades, all of which would benefit from lower prices and a declining market. On April 25, 2006, the second-to-last trading day for the May NG Futures Contract, also known as the penultimate day, Amaranth bought 6,600 June \$7.25 puts, 5,150 June \$7.00 puts and 120 July \$7 puts. Amaranth did not trade any other NG Futures options that day. On April 26, the termination day for the May NG Futures Contract, Amaranth bought 3,000 \$6.75 June puts and 180 July \$7 puts. Again, Amaranth did not trade any other NG Futures options.

101. Sales during the last minutes of the May NG Futures Contract termination day on April 26 caused prices on that contract to fall. In response to that fall in prices, prices

¹⁵⁸ See *Markowski v. SEC*, 274 F.3d 525, 529 (D.C. Cir. 2001) (finding that overall financial losses resulting from a failed scheme do not prevent a finding of intent to manipulate). The defendants in *Markowski* attempted to prevent a drop in the price of a particular security so as to maintain customer interest in their investment firm and sustain confidence in the firm’s other securities, attempting thus to prevent potential additional losses. *Id.*

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also fell in the last two minutes of trading of the June and July contracts, as the market maintained the “spread,” or difference in price, among these three contracts. The June and July contracts settled lower on April 26, and Amaranth profited significantly. Amaranth reported its resulting June option position profit as approximately \$20,600,000, and applying the methodology used above as to the June swap positions, the benefit to Amaranth was at least \$6,700,000. These profits were derived from the decline in prices of the June and July contracts that resulted from trading of the May NG Futures Contract in the last two minutes of the settlement day, selling that was virtually dominated by Amaranth.

102. We note that Amaranth’s daily profit and loss statement for April 26 states that Calgary Energy gained \$37 million on its short Summer positions for the day, as prices decreased by an average of \$0.15. The grand total for Calgary Energy on the day was \$41,601,586.¹⁵⁹ As noted, these net gains probably include gains and losses unrelated to the manipulation, but also provide circumstantial evidence that complements our forensic (and necessarily imprecise) analysis.

103. In a letter dated August 15, 2006, Amaranth provided an explanation of its trading on April 26 in response to an inquiry from the NYMEX dated August 2, 2006.¹⁶⁰ The response was written and approved by Hunter and several other Amaranth executives, and signed by CRO Carrieri. But Amaranth’s August 15 letter raises more questions than it answers and is in some respects contradicted by the contemporaneous evidence. First, Amaranth’s letter provides misleading information as to its position with respect to May swaps. It acknowledges that “by April 26” (a careful avoidance of describing what happened “on April 26”) it had built a short position of roughly (13,000) May swaps, and thus had a net short position in both the May NG Futures Contract and May swaps of (10,000). However, it failed to reveal that it sold an *additional* 10,000 May swaps *that day*, so that its actual net position (which stood to gain from any manipulation) was short (19,334) contracts.

¹⁵⁹ AALLC_REG0693426-32 (including a roughly \$31 million gain on the WINTERVOLSPREAD2, which included substantial May positions). Staff’s analysis of the data provided by Amaranth, which includes only trades related to natural gas, shows a daily profit of roughly \$49 million for April 26 including about \$30 million on the WINTERVOLSPREAD2. AMARANTH_REG091765_pos0425.xls, AMARANTH_REG091766_pos0426.xls (Amaranth end of day position reports for April 25 and 26, 2006).

¹⁶⁰ AMARANTH_REG_054788-90 (Amaranth’s response, dated August 15, 2006).

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104. Amaranth also claimed falsely, that its trading of the May NG Futures Contract that day was related to its desire to reduce its overall Summer-Winter spread position, and that it was forced to trade the NG Futures Contract when it did (*i.e.*, roughly 3,000 contracts in the final three minutes) because of its inability to sell the desired amount of Winter contracts.¹⁶¹ Amaranth's explanations that the trading in the May Contract was linked to its attempts to sell Winter contract months during the close, that Hunter would expect there to be much liquidity in the Winter months, or that he would wait until the settlement period to try to find this liquidity are difficult to accept. As another Amaranth trader testified:

Well, during the May settlement most of the world or by world I mean the market is concerned with May trading only, or very – things that are linked to May, like a May-June spread or May-July spread. There are not a lot of people willing to go trade Winters or say 2008 gas during that half-hour period.¹⁶²

In fact, Amaranth's position in the expiring May NG Futures Contract was an outright position (not a spread), that was completely independent of its position in other months. Further, Amaranth added to any purported need to "sell winters" with the (10,000) additional short summers about which it omitted to tell NYMEX. More generally, Amaranth had any number of alternative methods to reduce its summer/winter spread, including simply rolling forward into June any May positions that could not be offset with sales of winters.¹⁶³ None of those other options would have involved selling NG Futures in the settlement period, and most of them would have involved less price and execution risk.

¹⁶¹ *Id.* at 2.

¹⁶² Lee Dep. 88:11-17 (Mar. 21, 2007 morning session).

¹⁶³ To "roll" out of a position simply means that the trader moves his position in a given contract month to a later month. For example, if a trader had a long position in the May NG Futures Contract, he would roll out of it by selling out his position in the May NG Futures Contract and simultaneously buying an equal number of June NG Futures Contracts. The result is that he would have zero May NG Futures Contracts and a long position in the June NG Futures Contract. If the trader had a short position, he would buy May NG Futures Contracts and sell an equal number of June NG Futures Contracts, so that he eliminates his position in May and has a short position in the June NG Futures Contract.

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105. Aside from demonstrably inaccurate data and suspect explanations, we note that Amaranth frames its letter in terms of: “Here’s one way you might employ this strategy,” rather than stating what it in fact did. In the end, we believe that the August 15 letter represents an attempt by Amaranth to conceal from or falsely rationalize to the NYMEX its trading strategy on April 26.

106. As with the trading in the March and April NG Futures Contract, absent any credible alternative explanation or justification for this trading behavior, we preliminarily find that Amaranth manipulated the settlement price of the May 2006 NG Futures Contract, in violation of the Anti-Manipulation Rule.

4. Trading in Summer 2006

107. Hunter and Donohoe appear not to have attempted to manipulate the settlement price of June, July, or August NG Futures Contract. While the reasons behind this change in strategy are not entirely clear, it appears that, due to forces unrelated to these violations, Hunter’s natural gas portfolio suffered significant losses in the range of \$1 billion during the month of May, and Amaranth was forced to liquidate assets to have sufficient cash on hand to meet prospective margin calls.¹⁶⁴ As such, Hunter was short on capital and time for such endeavors, and under significant pressure from both Amaranth’s senior management and its risk managers (who themselves were responding to pressure from Amaranth’s investors) to reduce risk in Amaranth’s natural gas positions.¹⁶⁵ In any event, by May 2006, the Calgary traders were under actual supervision of Amaranth management for the first time in half a year. Maounis testified that he directed the Calgary team to return to Greenwich for days at a time, on a regular basis, starting in June and through September, in part, to separate them from homes and families in order to motivate them to address the May losses.¹⁶⁶

D. Amaranth’s Trading “In Connection With” Commission-Jurisdictional Transactions

108. Amaranth’s manipulation of the NG Futures Contract settlement price was “in connection with” Commission-jurisdictional transactions. First, the settlement price

¹⁶⁴ Maounis Dep. 136:18-137:9 (Nov. 20, 2006 morning session).

¹⁶⁵ See, e.g., Jones Dep. 79:9-81:9, 131:24-138:10 (Nov. 13, 2006 morning session); Maounis Dep. 22:20-29:19 (Nov. 20, 2006 morning session).

¹⁶⁶ See Maounis Dep. 21:15-22:19, 141:22-142:6 (Nov. 20, 2006 morning session).

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directly sets the price for any contracts that ultimately go to delivery at Henry Hub. Second, the settlement price is directly incorporated into the price for physical basis transactions. As noted above, physical basis transactions have two legs: one leg set by the NG Futures Contract settlement price and a leg consisting of a fixed amount that is added or subtracted from the settlement price, which represents the expected basis at that location. Finally, a number of LDCs use the NYMEX price itself for supply agreements.

109. In addition, as noted, physical basis transactions make up all or a substantial majority of the bid week monthly transactions at trading points in the East, Mid-Continent, and the Gulf Coast, which are used to calculate the monthly price indices at these points. These indices are relied on by consumers, producers, marketers, and state regulators in pricing monthly wholesale transactions, a substantial volume of which are Commission-jurisdictional. Moreover, the effect of any manipulation of the NG Futures Contract settlement price on Commission-jurisdictional transactions is self-executing because the parties to these transactions select the NG Futures Contract settlement price in advance as a price benchmark and as a basis of the bargain.

110. The Anti-Manipulation Rule applies whether or not the manipulator's principal or exclusive purpose is the manipulation of physical natural gas sales. In Order No. 670, we stated that "we do not intend to construe the Final Rule so broadly as to convert every common law fraud that *happens to touch* a jurisdictional transaction into a violation of" the Anti-Manipulation Rule.¹⁶⁷ However, such a transaction would be covered if "in committing fraud, the entity . . . intended to affect, or have acted recklessly to affect, a jurisdictional transaction."¹⁶⁸ We noted that the "in connection with" language is drawn from similar language of Rule 10b-5 which has been very liberally construed.¹⁶⁹ Accordingly, the Anti-Manipulation Rule applies where there is a "nexus" between the manipulative conduct and the jurisdictional transaction.¹⁷⁰ Under the analogous Rule 10b-5 precedent, the alleged manipulator need not be a party to the jurisdictional

¹⁶⁷ Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 22 (emphasis added).

¹⁶⁸ *Id.*

¹⁶⁹ *Id.*

¹⁷⁰ *See id.* at P 16 (stating where there is no "nexus" between the conduct and a jurisdictional transaction, fraud and manipulation in a non-jurisdictional transaction is not subject to the Anti-Manipulation Rule).

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transaction,¹⁷¹ nor must the connection be overwhelmingly direct.¹⁷² Finally, we have also noted that a determination of manipulation, in general, is “a question of fact that is to be determined by all the circumstances of a case.”¹⁷³ Given the facts discussed above, the manipulative conduct at issue here is more than sufficient to meet the generalized “in connection with” requirement.

E. *Scienter*

111. The evidence summarized above indicates that both Hunter and Donohoe traded with the intent to manipulate the settlement price of the March, April, and May 2006 NG Contracts. The settlement price directly sets the price of any futures contracts that go to delivery. Thus, Amaranth’s conduct amounts to the intentional manipulation of the price for that jurisdictional gas.¹⁷⁴ This is so even if the *object* of the manipulation was simply

¹⁷¹ This fact is apparent from a textual reading of the Anti-Manipulation Rule, which prohibits “any entity” from engaging in manipulation “in connection with” a jurisdictional transaction (not “engaged in” or “a party to” a such transaction). Moreover, cases under the Securities Exchange Act of 1934, 15 U.S.C. § 78(b) (2000) (Exchange Act), generally demonstrate that one can violate Rule 10b-5 (which implements Section 10(b) of the Exchange Act) without being a purchaser or seller. *See, e.g., Basic, Inc. v. Levinson*, 485 U.S. 224 (1988) (permitting shareholder suit for damages under 10b-5 where company made misleading statements that affected its own stock). Section 10(b) also does not require deception of an identifiable purchaser or seller, only deception “in connection with the purchase or sale of any security,” in keeping with the Exchange Act’s goal of ensuring honest markets. *See United States v. O’Hagan*, 521 U.S. 642, 658 (1997).

¹⁷² The Anti-Manipulation Rule prohibits an entity from “directly or indirectly” committing fraud. The Supreme Court construes the “in connection with” language of the SEC regulatory scheme on which the Anti-Manipulation Rule is modeled flexibly, not technically and restrictively, in order to accomplish the scheme’s remedial purposes. *See SEC v. Zandford*, 535 U.S. 813, 819 (2002) (citations omitted); *Superintendent of Insurance v. Bankers Life & Casualty Co.*, 404 U.S. 6, 12 (1971).

¹⁷³ Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 50.

¹⁷⁴ *See* NYMEX Exchange Rulebook § 220.11(D) (“Natural Gas Futures Contract – Delivery Procedure”):

(D) SETTLEMENT PRICE

The last settlement price shall be the basis for delivery.

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to benefit swap or other derivative positions. Although this amount of physical gas is relatively small compared to the overall market and Amaranth did not take any contracts to delivery, the intent link is strong.

112. Importantly, Amaranth and its traders also knew that the NG Futures Contract settlement price affected or determined prices for physical gas and that manipulation of this price would harm all market participants. In a letter to the NYMEX, Amaranth stated that “the public relies on [the NG Futures Contract settlement price] as a *key price benchmark* for physical and financial contracts involving natural gas” (emphasis added).¹⁷⁵ Similarly, Amaranth traders and risk managers acknowledged the close relationship between the futures and physical markets and the importance of the NG Futures Contract as a price benchmark for substantial volumes of physical natural gas.¹⁷⁶ Amaranth and its traders certainly were eminently aware of the effect of the NG Futures Contract settlement price in setting the price of physical gas from their knowledge of market fundamentals and from their experience basis swap trading.¹⁷⁷ At the very least, Hunter and Donohoe were reckless with respect to the impact of their manipulation of the NG Futures Contract settlement price on prices in Commission-jurisdictional transactions. An entity may engage in reckless conduct through willful blindness or

http://www.nymex.com/rule_main.aspx?pg=33#220.11.

¹⁷⁵ AMARANTH_REG_054783-84 (August 30, 2006 Letter to the NYMEX from Amaranth’s Michael Carrieri).

¹⁷⁶ See, e.g., Donohoe Dep. 78:15-82:15 (Mar. 14, 2007 mid-afternoon session); Calhoun Dep. 57:24-61:17 (Mar. 20, 2007 mid-afternoon session); Jones Dep. 38:14-39:14 (Nov. 13, 2006 late afternoon session); Lee Dep. 31:23-37:16 (Mar. 21, 2007 mid-afternoon session); Hunter Dep. 18:3-23 (Nov. 17, 2006). As Amaranth trader Lee explained:

[A]nything that references the NYMEX natural gas price theoretically is linked ... [A]n eastern [physical] basis contract, let’s say Transco Zone Six New York, it references the settlement contract price. So theoretically whatever that settle is, that’s the price New Yorkers are going to pay for the price of gas, so yes.

Lee Dep. 66:10-23 (Mar. 21, 2007 mid-afternoon session).

¹⁷⁷ Calhoun Dep. 15:24-16:7, 42:11-43:21 (Mar. 20, 2007, morning session); see also Basarowich Dep. 26:18-23, 34:21-35:2 (Mar. 28, 2007, morning session); Lee Dep. 12:13-15:24, 35:8-37:16 (Mar. 21, 2007 mid-afternoon session).

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ignorance of the effect of its actions. In the context of the SEC's Rule 10b-5 on which the Anti-Manipulation Rule was modeled, recklessness may be found if there is a danger "so obvious that the actor must have been aware of the danger."¹⁷⁸ That test is amply satisfied here.

III. NOTICE OF PROPOSED PENALTIES

113. The remedies available for these violations include civil penalties and disgorgement of profits.¹⁷⁹ We discuss each in turn, after first assessing the timing and magnitude of the violations.

A. The Timing and Magnitude of the Violations

114. We have authority to impose a civil penalty of up to \$1 million per violation, per day for any violations of a provision of the NGA or a Commission rule or order implementing one of those provisions that occurred or continued on or after August 8, 2005. Rule 1c.1 became effective January 26, 2006, and Amaranth's manipulative trading began about a month later and continued through late April, and is thus covered, temporally, by the Rule.

115. Neither EAct 2005 nor our civil penalty regulation prescribes a formula for how a "violation" will be characterized or "counted" for purposes of assessing civil penalties. This is for good reason. The nature, timing, and numerosity of violation(s) will depend on the facts and circumstances of each case. And, as courts have noted, the means of manipulation "are limited only by the ingenuity of man."¹⁸⁰

116. In this case, Amaranth entered orders resulting in 219 separate, multi-contract executions of orders reported as "fills" in open outcry pit trading in order to sell its

¹⁷⁸ *Wonsover v. SEC*, 205 F.3d 408, 414 (D.C. Cir. 2000); *see also SEC v. Steadman*, 967 F.2d 636, 641-42 (D.C. Cir. 1992) *quoting Sunstrand Corp. v. Sun Chem. Corp.*, 553 F.2d 1033, 1045 (7th Cir.) (recklessness is met where a company "wantonly ignored" readily available evidence of the unfairness of a proposed acquisition and therefore failed to disclose certain facts).

¹⁷⁹ EAct 2005 § 314(b) (2005) (codified at 15 U.S.C. 717t-1).

¹⁸⁰ *Cargill, Inc. v. Hardin*, 452 F.2d 1154, 1163 (8th Cir. 1971).

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futures in the three settlement periods.¹⁸¹ Each of these executions of orders involved varying numbers of futures contracts (ranging from as few as 10 to as many as 300). Each of these orders involved a different price and an independent transaction between floor brokers on behalf of customers or themselves.

117. The executions of orders were the essential acts that moved the settlement price. Amaranth's orders indicate its priority was to liquidate the futures position as quickly as possible, no matter how low the prevailing market price became, rather than to achieve sales at as high a price as possible, or to trade throughout the settlement period in an effort to match the settlement price. In addition, the evidence shows Amaranth armed its floor broker with information on its intent, and that either the floor broker used floor trading techniques with its orders to signal to others in the ring so as to maximize the effect of the overall Amaranth sales, or the market recognized that significant selling was occurring and responded, creating significant downward price effects.

118. On the facts of this case, it is appropriate to find that each of the 219 floor transactions, or "fills," was a separate violation and accordingly the maximum available civil penalty for all of these violations is \$219,000,000.

B. Civil Penalties: Factor Analysis and Monetary Assessment

119. Not all cases merit maximum civil penalties. In determining the appropriate size of a civil penalty for a given violation, we were mandated by Congress to consider the seriousness of a violation and the remedial actions, if any, taken by a violator in response to a violation.¹⁸² These factors were more specifically described in our *Enforcement Policy Statement*.¹⁸³ We apply those factors to the facts of every case in order to arrive at an appropriate civil penalty amount.

120. The seriousness factors are: (1) What harm was caused by a violation? (2) Was a violation the result of manipulation, deceit, or artifice? (3) Was the action willful, reckless, or deliberately indifferent to the results? (4) Was it part of a broader scheme? (5) Is it a repeat offense or does the company have a history of violations? (6) Was the

¹⁸¹ NYMEX_00001, NYMEX_00003-04 (NYMEX NG Futures Contract trade data).

¹⁸² EPLA 2005 § 314(b) (2005) (codified at 15 U.S.C. 717t-1(c)).

¹⁸³ *Enforcement of Statutes, Orders, Rules, and Regulations*, 113 FERC ¶ 61,068 (2005) (*Enforcement Policy Statement*).

wrongdoing related to actions by senior management? (7) How did the wrongdoing come to light? (8) What effect would potential penalties have on the financial viability of the company? The remedial action factors are: (1) internal compliance, (2) self-reporting, and (3) cooperation. We analyze these factors by two groupings of Respondents: the Amaranth Entities and the individual traders.

1. Amaranth Entities

121. The Amaranth Entities are punishable for the actions of their employees, officers, and agents.¹⁸⁴ Hunter and Donohoe fall into several of those categories. Moreover, all of the technically, legally distinct Amaranth organizations are in practice a tightly knitted association-in-fact, which operated as a single entity under the direction of Maounis and his fellow executives. The “Advisor” entity that employed the traders, and the traders themselves, under the Advisory Agreement between Amaranth LLC and Amaranth Advisors L.L.C., are (or were) broadly empowered agents of the Fund entities.¹⁸⁵ Thus, under all the circumstances, it is appropriate to assess only one civil penalty against the Amaranth Entities, collectively.

¹⁸⁴ We routinely sanction a company for the actions of its employees. *See, e.g., In re PacifiCorp*, 118 FERC ¶ 61,026 (2007); *In re SCANA Corp.*, 118 FERC ¶ 61,028 (2007), *In re Entergy Servs., Inc.*, 118 FERC ¶ 61,027 (2007); *In re NorthWestern Corp.*, 118 FERC ¶ 61,029 (2007); *In re NRG Energy, Inc.*, 118 FERC ¶ 61,025 (2007). It is well established that traditional vicarious liability rules ordinarily make principals or employers vicariously punishable for acts of their agents or employees in the scope of their authority or employment. *See In re Raymond James Fin. Servs, Inc.*, 2005 SEC LEXIS 2368, at *170 (Sept. 15, 2005) (in fraud action, holding that law of agency and doctrine of *respondeat superior* are available to find firm liable for actor’s illegal actions); *AT&T v. Winback and Conserve Program, Inc.*, 42 F.3d 1421, 1431 (3d Cir. 1994) (recounting how “agency doctrine, including the theory of apparent authority, has long been a part of the federal system” and stating “a corporation can only act through its agents, and therefore only can be bound through application of agency principles”); *Am. Soc’y of Mech. Eng’rs v. Hydrolevel Corp.*, 456 U.S. 556, 567 (1982) (“The apparent authority rule has long been the settled rule in the federal system.”).

¹⁸⁵ AMARANTH_REG049258-59 (Advisory Agreement between Amaranth Advisors LLC and Amaranth LLC dated December 31, 2003).

a. Seriousness Factors

122. Almost all of the seriousness factors favor a very high penalty as to the Amaranth Entities. In general, this is a *serious* case. It involves the Anti-Manipulation Rule, one of the most important elements fulfilling the Commission's mandate to ensure fair and competitive markets. The only factor favoring the Amaranth Entities of which the Commission is aware is the absence of prior similar behavior. We discuss the remaining factors more particularly below.

i. Harm

123. The harm to the market was significant. Consumers are harmed when prices are set by manipulation. The harm to consumers from an upward manipulation is immediate. Harm from downward manipulation is more long term. The manipulation also diluted the price discovery and hedging functions that these markets are supposed to provide. These functions depend on pricing based on fundamentals and valid predictions about future values, and are perverted by manipulative schemes designed to create prices unconnected to such fundamentals. Producers who sold natural gas pursuant to physical delivery obligations tied to the NG Futures Contract, or indirectly based on the NG Futures Contract as a price benchmark, were paid significantly less than the market price for their gas. The pecuniary interests of state governments and the federal government were also affected given that these governments sell rights to produce natural gas from public lands based on royalties tied to the NYMEX settlement price. Policing market behavior is about protecting the interest of *all* participants, sellers and consumers alike. In order to attract the supply and investment in production and infrastructure on which the natural gas markets rely, the prices sellers obtain for their product must be based on a fair and well-functioning market. Amaranth's manipulation harmed these interests significantly.

ii. Willfulness

124. The manipulation was the result of intentional and deceitful conduct. It was willful as to the futures settlement price that sets the price of physical gas sold on delivery from the NG Futures Contract and (at least) reckless as to the secondary physical market impact such as physical basis. We find especially troubling the evidence from the IMs that shows the traders knew their conduct was suspect (*e.g.*, Hunter telling Glover "shhhh")¹⁸⁶ and that the subsequent explanations for the trading are at best disingenuous and arguably false.

¹⁸⁶ AALLC_REG0684227 (Instant Message from Hunter to "gloverb," February 24, 2006).

iii. Senior Management Involvement

125. Hunter was a Vice-President of Amaranth at the time of the offenses and the more senior managers Maounis, Carrieri, and Jones created the conditions that permitted the violations (or may have actually known of them). The wrongdoing was discovered only as a result of Commission inquiry (not as a result of management's discovery or correction). The failure of Amaranth's senior management to supervise and prevent manipulative trading by traders Hunter and Donohoe is a particularly significant factor in our determination of the amount of civil penalties. In particular, Hunter's trading and related activities raised a number of "red flags" that must have put Jones, Carrieri, and Maounis on notice that Hunter was likely engaged in manipulation, or at the very least, highly improper conduct. These executives either actually knew of Hunter's manipulative trading or willfully blinded themselves to the numerous warning signs.¹⁸⁷ Because of the importance of this factor to our determination in this case, we discuss it in detail.

126. As noted, Hunter was hired in 2004 with the executives' awareness of the allegations that he had engaged in risky behavior at Deutsche Bank.¹⁸⁸ To keep him at Amaranth in 2005, the executives elevated him in status and importance and moved him out from under Arora's direct supervision.¹⁸⁹

127. When Amaranth sought the hedge exemption shortly thereafter, Amaranth represented to NYMEX in August 2005, that the "Chief Risk Officer [Jones] ha[d]

¹⁸⁷ We note that the Anti-Manipulation Rule may be applied to sanction misconduct by senior management who are responsible for supervising traders and who intentionally or recklessly permit manipulative conduct to occur. Indeed, we have given serious consideration to seeking civil penalties against the Amaranth executives personally. We exercise prosecutorial discretion in this case not to seek penalties from the executives personally, in no small measure because the largest investors in the Funds were insiders and employees, and these executives were among the largest holders in that category. Maounis Dep. 27:9-14 (Nov. 20, 2006 morning session). Thus, these executives will pay a significant price due to the payment of the civil penalty by the Amaranth Entities. We observe that future cases involving executive management failures to rein in violations by employees may not present this unique element.

¹⁸⁸ See *supra* P 35; see also Arora Dep. 76:3-21 (Nov. 14, 2006 afternoon session).

¹⁸⁹ AMARANTH_REG003387-93 (June 1, 2005 Letter setting forth Hunter's compensation package); see also Arora Dep. 16:21-25 (Nov. 14, 2006 morning session).

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assigned a risk manager “to sit among the energy traders to facilitate close monitoring of price risk within the book as well as market conditions.”¹⁹⁰ But in October 2005, Amaranth allowed Hunter to move his trading desk to Calgary and did not assign risk management or compliance personnel to sit with the Calgary natural gas traders. As noted, Amaranth increased Hunter’s percentage of profits due for his trading, thus creating further incentive to earn extraordinary profits from the manipulation. Subsequently, Amaranth allowed Hunter to increase the size of his natural gas positions such that Amaranth allocated well over *half* of its capital to its energy book by the Summer of 2006, thus increasing the Funds’ dependence on Hunter,¹⁹¹ while Amaranth was stating to its investors that it intended to reduce its energy exposure.¹⁹² Before he left, Arora expressed to Jones and Maounis concerns about Hunter.¹⁹³

128. Managers in Greenwich failed to construct their IT systems such that they could directly look at computer screens that reported the trading and position data in real time of the trading going on in Calgary.¹⁹⁴ Jones appears to have experienced rather poor

¹⁹⁰ A_CFTC000051-56 (Amaranth Letter to NYMEX dated August 23, 2005 at 2). Chasman, Amaranth’s head risk manager for energy trading, recognized the need to have risk management personnel “on the ground” in Calgary, but Amaranth had still not assigned anyone to the task by September 2006, nearly a year after Hunter first relocated to Calgary. Chasman Dep. 116:5-116:20 (Nov. 28, 2006 morning session).

¹⁹¹ See, e.g., AALLC_REG0767207-28, AALLC_REG0605202, AALLC_REG0550756, AALLC_REG0609346, AALLC_REG611335 (series of documents Amaranth provided to investors outlining the percentage of risk capital allocated by strategy, e.g., energy, long/short equity, merger arbitrage, US/international convertible arbitrage, for the period from January 2004 through June 2006. In early 2005, Amaranth devoted less than 20 percent to energy, growing to roughly 30 percent by late summer 2005, then 35 percent or more in early 2006, then finally shooting up to 50 percent in May 2006 and 56 percent in June 2006, the last month for which this report was prepared.).

¹⁹² Maounis Dep. 100:25-101:23 (Nov. 20, 2006 morning session); Jones Dep. 131:19-134:13 (Nov. 13, 2006 morning session).

¹⁹³ Jones Dep. 38:15-41:4 (Nov. 13, 2006 morning session); Arora Dep. 25:4-29:15 (Nov. 14, 2006 morning session); Maounis Dep. 12:8-13:4 (Nov. 20, 2006 morning session).

¹⁹⁴ Maounis Dep. 36:7-21 (Nov. 20, 2006 morning session).

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communications with Hunter¹⁹⁵ and could only view intra-day activity when he “sat on the trading desks” which he never did in Calgary.¹⁹⁶ As to Maounis, Hunter’s direct supervisor, though he could have reviewed the computerized reports of actual trading activity himself in real time, he “never looked at the screens” in Calgary, Greenwich or anywhere else apparently.¹⁹⁷ In fact, Maounis and Jones visited Calgary once, and not to supervise or even observe the trading operation, but instead to attend the July 2006 “Stampedes” event and attend dinners and events with investors and other market participants.¹⁹⁸

129. In mid-March (just a few weeks after the first manipulative trading occurred), NYMEX sent Amaranth a violation letter for violating the very same NG Futures Contract hedge exemption (on February 23, 2006 – the day just prior to the first settlement of interest here).¹⁹⁹ This highlighted (or should have) for Amaranth’s senior management that they needed to evaluate Hunter’s activity and perhaps exercise some measure of control, yet the manipulative trading continued in March and April, perhaps

¹⁹⁵ Indeed, there was some tension between Jones and Hunter in that Jones was frustrated by the difficulties in reaching the traders in Calgary to obtain information necessary to monitor their positions and risk profile. Jones Dep. 124:20-130:14 (Nov. 13, 2006 morning session); AALLC_REG0011580 (April 24, 2006 E-mail in which Jones tells Hunter “[y]ou need to have someone on the desk by 8:30 EST. every day. Ideally someone who has a qualified opinion on your portfolio or who can quickly contact someone who has.” Jones re-sent the identical e-mail to Hunter each day at roughly the same time for the rest of that week until April 28, apparently to emphasize his frustration with Hunter’s group). Unfortunately, any improvement in communications seems not to have occurred until after the manipulative conduct presented here.

¹⁹⁶ Jones Dep. 121:4-18 (Nov. 13, 2006 morning session).

¹⁹⁷ Maounis Dep. 36:22-25 (Nov. 20, 2006 morning session).

¹⁹⁸ Maounis Dep. 45:13-49:4 (Nov. 20, 2006 late afternoon session).

¹⁹⁹ AMARANTH_REG_054785 (Letter from NYMEX to Amaranth regarding Violation of Exchange Rule 9.28, March 13, 2006); *see* NYMEX Exchange Rulebook § 9.28, *available at* http://www.nymex.com/rule_main.aspx?pg=8#9.28. The letter referred to Amaranth’s open commitment in the March 2006 NG Futures Contract, and stated that at the end of the day on February 23, 2006, Amaranth had exceeded its prompt month hedge exemption position limit of 2,500 contracts by 1,146 contracts (*i.e.*, almost 46 percent). AMARANTH_REG_054785.

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because Hunter's natural gas trading book was an "enormous source of profitability for the fund in the beginning of [2006]." ²⁰⁰

130. Amaranth senior management also participated in drafting and/or approving misleading statements in its August 15, 2006 letter to the NYMEX regarding its natural gas trading on April 26 in the May NG Futures Contract. A second NYMEX/Amaranth exchange from later in August 2006 shows just how far these executives were willing to let Hunter trade at his discretion with minimal supervision. After several hedge exemption violations *and* a NYMEX investigation opened against Amaranth for NG Futures Contract settlement trading, when the executives' control and oversight over Hunter should have been at its zenith, at the end of August 2006 as the settlement period approached, Hunter again violated the NYMEX's position limits – this time exceeding the standard limit by almost 9,000 combined futures and futures-equivalent contracts. ²⁰¹ The NYMEX took the unusual step of contacting Amaranth the morning of the settlement day and instructing Amaranth to liquidate that position in an orderly fashion over the course of the day and not to carry any large positions into the settlement. ²⁰²

131. In reviewing this record of management behavior through the winter and late spring of 2006, we are struck by the contrasting approach in May 2006 when Hunter's book lost Amaranth over \$1 billion, but the firm was still a going concern, Maounis started recalling Hunter and team physically to Greenwich on a routine basis for days at a time, all through the summer of 2006. ²⁰³ So, when the executives really wanted to control Hunter, they made him come to Greenwich, but when the "enormous source of profitability" was rolling, management was content to leave Hunter to his devices more than half a continent away. This record is deeply troubling and weighs heavily in our determination that the Amaranth Entities should be severely penalized for the behavior of Hunter and Donohoe.

²⁰⁰ Jones Dep. 71:17-19 (Nov. 13, 2006 morning session).

²⁰¹ AMARANTH_REG091856_pos0828.xls (Amaranth end of day position report for August 28, 2006, showing short position of (6,721) September NG Futures contracts and short (4,760) NN futures at Henry Hub for the September contract).

²⁰² See AMARANTH_REG_054783-74 (August 30, 2006 Letter from Amaranth's Carrieri to NYMEX, referencing the fact that Amaranth had been instructed by NYMEX not to trade large orders during the settlement period on August 29).

²⁰³ Maounis Dep. 21:15-23:14 (Nov. 20, 2006 morning session).

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iv. Financial Impact

132. Evaluation of the financial viability of the company as a factor seems neutral, as the firm is dissolving. There are sufficient assets left in the Amaranth Entities to satisfy maximum penalties.

b. Mitigation Factors

133. The mitigation factors do not much alter the case for a high penalty. The company did not self report. The compliance and risk management program was weak. Cooperation with staff investigation has been acceptable (as it should be in all cases) but not exemplary so as to merit consideration in setting the penalty amount.

134. On balance, the penalty factors support a nearly maximum civil penalty. A civil penalty against the Amaranth Entities of \$200,000,000 is appropriate.

2. Traders Hunter and Donohoe

135. As to these two individuals, virtually all of the seriousness and mitigation factors weigh in the same way for a high penalty as they do with respect to the Amaranth Entities. Indeed, because they personally and directly engaged in the manipulation, the traders' level of culpability is higher. Hunter's cooperation has, of late, gone from acceptable to unacceptable, including a refusal voluntarily to complete his testimony.²⁰⁴ On the other hand, the traders have *much less* of an ability to pay, though they were highly compensated and do have significant resources. Hunter still has a substantial net worth after having purportedly earned \$75 to \$100 million in 2005, as well as seven- or eight-figure compensation in previous years.

136. Donohoe presents a similar case to Hunter, but has a much lower net worth and stood to earn much less from the illegal behavior (based on industry standards for an execution trader, likely only one to two percent of profits compared to fifteen percent as

²⁰⁴ Although the details are unnecessary to recount here, Hunter failed to appear for an agreed upon second deposition by staff and subsequently refused voluntarily to give further sworn testimony, agreeing only to be interviewed not under oath. Under different circumstances, staff might have subpoenaed him and proceeded with enforcement of that subpoena in United States District Court. However, on the facts of the case, in particular the vast body of inculpatory evidence already gathered, as well as a deposition Hunter subsequently gave to the CFTC a transcript of which staff obtained, this step was unnecessary.

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to Hunter). Moreover, he was more of an instrumentality (though knowingly so) of the manipulation as opposed to Hunter, the mastermind.

137. There are strong enforcement and deterrence policy bases for setting the civil penalties for individual traders at a high level. The traders in this industry have historically been capable of easily recovering from disastrous performance or misconduct by simply moving to, or starting up, another trading operation. Even after spectacular failures, a trader can attract capital to start new trading activities or a new fund. Currently, Hunter is reported to be developing a new hedge fund of his own called Solengo, which (should it be permitted to register with appropriate regulatory authorities) is also expected to trade in financial energy products. Donohoe is currently employed by Bank of Nova Scotia and is involved in energy trading for that firm. Under the circumstances, the Commission sends here a clear message that manipulation will have severe personal consequences for individual traders in order to deter them and others from violative behavior.

138. Based on the foregoing factors, in particular the relative proportion of profits the traders stood to gain as compared to the Amaranth Entities, we find that civil penalties of \$30,000,000 for Hunter and \$2,000,000 for Donohoe are appropriate.

C. Disgorgement

139. Unlike civil penalties, we do not approach the assessment and ordering of disgorgement of unjust profits as a discretionary matter.²⁰⁵ Except in rare circumstances not present here, any unjust profits earned from the violations must be disgorged in their entirety. As noted, as a result of its manipulation, Amaranth profited by a total of *at least* \$59,000,000 and perhaps as much as \$168,000,000 on these three settlement days as a direct result of the manipulation. At a minimum the most conservative of these numbers, \$59,000,000 plus interest calculated at the rates published by the Commission for natural gas refund purposes should be disgorged.

²⁰⁵ *Enforcement Policy Statement*, 113 FERC ¶ 61,068 at PP 19, 23, 25 (2005) (“[A]t a minimum a company involved in wrongdoing must disgorge any unjust profits resulting from the wrongdoing.”).

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IV. CONCLUSION AND ORDER

140. In 2000 and 2001, when Enron traders manipulated western energy markets, they referred to their schemes as “experiments.”²⁰⁶ Their conduct bespoke an attitude that markets served as their private laboratories where they were free to tinker with prices and supply in order to test responses and to make extraordinary profits. Their “experiments” gave little care to the harmful impact of such behaviors on the functioning of the markets or harm to other market participants and the public at large. Congress passed the salient provisions of EAct 2005 in direct response to those behaviors and charged us with the obligation to detect, investigate, punish, and deter such manipulations. As Hunter’s “bit of an experiment” illustrates, even after the legal aftermath of Enron, the enactment of EAct 2005, and the promulgation of Commission rules, there are still those who need to recognize that manipulation, even in complex markets, can be detected and, when proven, will be punished severely.

The Commission orders:

(A) The Respondents, within 30 days of the date of this order, to file answers in accordance with 18 C.F.R. § 385.213 (2006) showing cause why they should not be found to have violated section 1c.1 of the Commission’s regulations by trading in the March, April, and May 2006 NG Futures Contract on February 24, March 29, and April 26, 2006.

(B) The Respondents, within 30 days of the date of this order, to file answers in accordance with 18 C.F.R. § 385.213 (2006) showing cause why their violations of section 1c.1 of the Commission’s regulations should not warrant the assessment of civil penalties of \$200,000,000 in the case of the Amaranth Entities, \$30,000,000 in the case of Hunter, and \$2,000,000 in the case of Donohoe and an order to disgorge unjust profits of \$59,000,000 plus interest as described in the body of this order.

²⁰⁶ See FERC Trial Staff, March 1, 2005, Initial Tape Testimony Filing, Docket No. EL03-180, at 8 (Enron audio files of telephone calls relevant to the “Get Shorty” scheme, entered as Exhibit No. S-123, File ID 158610, File Name 23-20000918-8363259-8411931.mp3); see generally *Final Report on Price Manipulation in Western Markets*, Docket No. PA02-2-000, at VI-3, VII-13, IX-12 (March 26, 2003), available at <http://www.ferc.gov/industries/electric/indus-act/wec.asp#skipnavsub> (follow “Part 2” hyperlink).

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(C) In any answer, Respondents to address any matter, legal, factual or procedural, that they would urge in the Commission's consideration of this matter.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.